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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,693	10/11/2001	Mikhail Boroditsky	03493.00311	6289

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EXAMINER	
WANG, QUAN ZHEN	
ART UNIT	**PAPER NUMBER**
2613	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/973,693	Applicant(s) BORODITSKY ET AL.	
	Examiner Quan-Zhen Wang	Art Unit 2613	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 07 June 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
   b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: 1-11 and 14.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.

Continuation of 11. does NOT place the application in condition for allowance because:

Applicants' arguments are not convincing.

Applicants amended the claims after a non-final Office Action. Applicants' amendments of the claims had changed the scopes of the claims, even though some of the claimed limitations remain the claims. Because the scopes of the claimed invention had been changed, new search and new ground rejection were necessary. Therefore, Applicants' arguments were moot in view of the new grounds of rejection. See MPEP Form Paragraph 7.40.

Applicants stated in the Remarks that "Clearly, if applicants' argument in the previous Office action are directed to other than the amendment to the claims, and are valid,, then the claims are patentable." This statement is not correct. Whether an application is patentable is determined by the merit of Applicants' claimed invention, not Applicants' arguments. Applicants further tried to invalidate the final rejections using examples of isolated elements A, B, C, and D. However, the fact is that the claimed elements are not isolated blocks, they have relationships. By deleting or adding elements, scope of the remaining elements could be changed because the change of relationships. For the instant application, the amended claim 1 included "... stacker is interposed between the tunable laser and the crossbar switch, through which the composite packet is injected into the network". It is crystal clear that the relationship of the stacker, tunable laser, and the crossbar switch had changed because of the newly added limitations. Therefore, Applicants' arguments are not convincing and the new search and consideration were necessitated by Applicants' amendments and the final rejection is proper.

Regarding claims 1, and 14, Chlamtac discloses a system (fig. 1) for providing high connectivity communications over a composite packet-switched optical ring network that includes a plurality of nodes, with at least one of the nodes comprising: an optical crossbar switch (fig. 1, bridge; and Section II B on page 5: "the core component of the bridge is a 2x2 space photonic switch", which having at least a first input directly connected to an incoming link of the network, a second input, a first output that is directly connected to an outgoing link of the network, and a second output) connected to said packet-switched optical ring network. Chlamtac differs from the claimed invention in that Chlamtac does not specifically teach that the system comprising a rapidly tunable laser for serially generating a plurality of packets, each packet being generated at a different wavelength. However, it is well known in the art to use a tunable laser for serially generating a plurality of packets. For example, Sasayama discloses to use a tunable laser for serially generating a plurality of packets (fig. 18). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate a tunable laser for serially generating a plurality of packets, as it is taught by Sasayama, into the system of Chlamtac in order to generate optical signals at different wavelength with fewer lasers. The modified system of Chlamtac and Sasayama further differs from the claimed invention in that Chlamtac and Sasayama do not specifically teach a stacker for stacking the plurality of serially generated packets to for a composite packet, and the stacker is interposed between the tunable laser and the crossbar switch. However, a stacker for stacking serially generated packets to form a composite packet is well known in the art. For example, Tsushima discloses a wavelength stacker (fig. 7, combination of delay element 14 and the DEMUX and combiner) for stacking a plurality of serially generated packets to form a composite packet (figs. 4a-4f). In addition, Chlamtac further discloses that the system is based on photonic slot routing and the "'photonic' slot carrying information simultaneously on the various WDM channels" (page 2, first paragraph in the left column). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate a stacker for stacking a plurality of serially generated packets to form a composite packet, as it is taught by Tsushima, in the modified system of Chlamtac and Sasayama and interposing the stacker between the tunable laser and the crossbar switch in order to form the "photonic slot" signals carrying information simultaneously on various wavelengths to be routed in the network.

Regarding claim 2, the modified system of Chlamtac, Sasayama, and Tsushima differs from the claimed invention in that Chlamtac, Sasayama, and Tsushima do not specifically teach that the wavelength stacker further comprising a plurality of optical circulator and a plurality of FBGs connected to and sandwiched between the plurality of optical circulators and the plurality of FBGs are cascaded and equally spaced between the plurality of optical circulators. However, incorporating optical circulator with Bragg grating to pass or prevent specific channels is well known in the art. For example, Mizrahi discloses an optical device comprising a pair of optical circulator and a plurality of FBGs connected to and sandwiched between the pair of optical circulators and the plurality of FBGs are cascaded and equally spaced between the pair of optical circulators (fig. 1). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate an optical device, such as the one disclosed by Mizrahi, in the modified system of Chlamtac, Sasayama, and Tsushima to stack and unstuck optical signals in order to add and drop optical signals in the optical network.

Regarding claim 3, Tsushima further teaches that the stacker also operates as an unstacker to recover and re-serialize the plurality of packets from the composite packet (fig. 8).

Regarding claim 4, Chlamtac further teaches to use the crossbar switch to facilitate a composite packet in a photonic time slot that is being propagated on said packet-switched optical ring network being added to the packet-switched optical ring network at a destination node (Paragraph B. Node and Bridge Architectures).

Regarding claim 5, Chlamtac further teaches to use the crossbar switch to facilitate a composite packet being assigned a photonic time slot and added to the packet-switched optical ring network (Paragraph B. Node and Bridge Architectures).

Regarding claim 6, Chlamtac further teaches that the optical crossbar switch in the system is wavelength independent (a "space photonic switch" is inherently wavelength independent).

Regarding claim 7, Chlamtac further teaches that the packet- switched optical ring network is a point-to-point network (fig. 1).

Regarding claim 8, Chlamtac further discloses that the optical crossbar switch facilitates a composite packet in a photonic time slot bypassing a given node depending on a position of the optical switch (Paragraph B. Node and Bridge Architectures).

Regarding claim 9, the modified system of Chlamtac, Sasayama, and Tsushima differs from the claimed invention in that Chlamtac, Sasayama, and Tsushima do not specifically teach that the dropped composite packet in the photonic time slot is further distributed to a plurality of user sites connected to the destination node by using Wavelength Division Multiplexing (WDM) techniques. However, it is well known in the art to distribute information to a plurality of user sites using WDM techniques. For example, Mesh discloses to distribute information to a plurality of user sites using WDM techniques (fig. 1; column 1, lines 33-36). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate an information distribution method using WDM techniques, such as the one disclosed by Mesh, into the modified system Chlamtac, Sasayama, and Tsushima in order to send information to each designated individual users.

Regarding claim 10, the modified system of Chlamtac, Sasayama, and Tsushima differs from the claimed invention in that Chlamtac, Sasayama, and Tsushima do not specifically teach the dropped composite packet in the photonic time slot is further detected in parallel. However, it is well known in the art to detect composite packet in the photonic time slot in parallel. For example, Adams discloses to drop signals using a DMUX (fig. 2, DEMUX 235) and the signals can be inherently detected in parallel. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate a DEMUX to drop composite packet in a photonic time slot, as it is taught by Adams, into the modified system of Chlamtac, Sasayama, and Tsushima in order to separate the multiplexed signals at different wavelengths and detect the information carried by each channel.

Regarding claim 11, it is inherent that a wavelength not matching a wavelength of a fiber Bragg grating (FBG) bypasses the grating transparently.

In conclusion, all the claimed limitations are disclosed by the combination of the prior art, the rejections of claims 1-11, and 14 still stand.

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